## **ABSTRACT**

A thermal decomposition apparatus for wastes comprises: a heating chamber; an inlet port; at least one pair of electrodes provided within the heating chamber; a plurality of balls each taking the shape of a sphere whose primary ingredient is carbon, provided between the at least one pair of electrodes so as to produce an electric discharge when a voltage is applied across the at least one pair of electrodes; an outlet port for discharging the gases into which the wastes are thermally decomposed; oxygen free or vacuum environment forming means or evacuating means.

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According to the present invention, an inexpensive thermal decomposition apparatus for wastes is provided which thermally decomposes almost all wastes at a high temperature of not lower than about 3000°C without producing harmful substances such as soot, dust, chlorine compounds, nitrogen compounds and/or dioxin.